

34

$$\begin{array}{r} 151 - 7.9 \\ \boxed{15} \quad + 7.9 \\ - 2.9 \end{array}$$

50

$$\frac{7}{12} + \left(+\frac{3}{4}\right) + \left(-\frac{1}{8}\right)$$

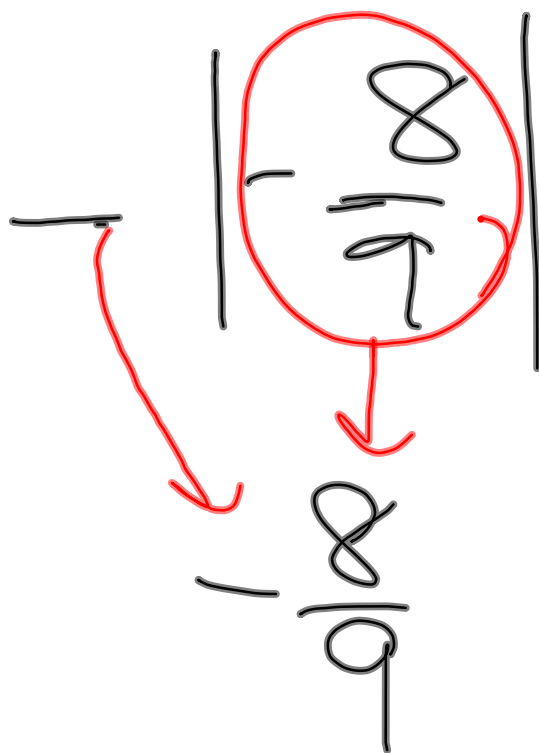
$$\frac{7}{12} + \frac{9}{12} + -\frac{1}{8}$$

$$\frac{16}{12} + -\frac{1}{8}$$

$$\frac{32}{24} + -\frac{3}{24}$$

$$\frac{29}{24} = 1\frac{5}{24}$$

48



SD.

$$|x| = 4$$

$$x = -4, 4$$

$$|x| = -3$$

.

2.5/2.7Multiplication & Division of Integers  
Properties of Multiplication

## 1) Commutative Property of Multiplication

\*Order does not matter.

$$-5(6) = 6(-5) \quad \text{OR} \quad a(c) = c(a)$$

## 2) Associative Property of Multiplication

\*The way you group doesn't change the outcome.

$$k \bullet (m \bullet n) = (k \bullet m) \bullet n$$

$$-6 \bullet (2 \bullet 3) = (-6 \bullet 2) \bullet 3$$

### More Properties!

#### 3) Identity Property of Multiplication

\*The product of a number and 1 is the number.

$$1 \bullet a = a \quad \text{OR} \quad (-12) \bullet 1 = -12$$

#### 4) Multiplication Property of Zero

\*The product of a number and 0 is zero.

$$c \bullet 0 = 0 \quad \text{OR} \quad 0 \bullet (-5) = 0$$

#### 5) Multiplication Property of Opposites

\*The product of a number and -1 is the opposite of the original number.

$$(-1) \bullet m = -m \quad \text{OR} \quad (-1) \bullet (-8) = 8$$

**1.  $5 \cdot 6 = 6 \cdot 5$**

**2.  $(2 + 4) + c = 2 + (4 + c)$**

**3.  $5 + 0 = 5$**

**4.  $-1 \cdot m = -m$**

**5.  $-j \cdot 1 = -j$**

**6.  $g \cdot 0 = 0$**



## Rules for Multiplying & Dividing Integers

The product/quotient of 2 integers with the same sign is the product/quotient of their absolute values.  
The product/quotient of 2 integers with different signs is THE OPPOSITE of the product/quotient of their absolute values.

In other words . . .

if the numbers are the same sign, the product or quotient is positive.

if the the numbers are different signs, the product or quotient is negative.

$$(-8) \cdot (-4) =$$

32

$$\frac{36}{-9} =$$

-4

$$2 \cdot (-6) \cdot (-3) =$$

30

-12 · -3

Let's get Algebraic on this!

Examples

Ex. 1

$$(-16)\left(-\frac{3}{4}\right)$$

12

Ex. 2

$$(-3)(5)(-2)(-6)$$

-180

Ex. 3

Evaluate when  $x = -7$ .

$$\frac{4x}{-2} + x^2$$

Now you try

$$\left(-\frac{2}{3}\right)(87)$$

$$(4)(-2)(-10)(7)$$

Evaluate when  $c = -3$ .

$$c^2 - 5c$$

And now some dividing . . .

Examples

Ex. 4  $32c \div -\frac{1}{8}$

Now you try

$$56m \div -2\frac{4}{7}$$

Ex. 5

*Simplify.*

$$\frac{16x - 24}{8}$$

*Simplify.*

$$\frac{9 + 27d}{-3}$$

$$-3 + 9d$$

Ex. 6

Evaluate when  $x = -5$  &  $y = -1$ .

$$\frac{2y}{x-1}$$

Evaluate when  $a = -\frac{1}{3}$  &  $c = \frac{1}{4}$ .

$$\frac{3a - 4c}{ac}$$